

Notice of Allowability

Application No.

10/786,354

Examiner

Andy Huynh

Applicant(s)

AHN ET AL.

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment dated 01/18/2005.
2. ☒ The allowed claim(s) is/are 1-3 and 5-16.
3. ☒ The drawings filed on 25 February 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 01/18/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Andy Huynh
Patent Examiner
AU 2818

DETAILED ACTION

In the Amendment dated January 18, 2005, claims **4 and 17** are canceled, and claims **1, 7, 12 and 14** are amended is acknowledged. Accordingly, claims **1-3 and 5-16** remain pending in this application.

Election/Restrictions

Claim **1** is generic and allowable. Accordingly, the restriction requirement as to the encompassed species is hereby withdrawn and claims **12-16**, directed to the species of a system having a multilevel wiring interconnect comprises an integrated memory circuit and a processor no longer withdrawn from consideration since all of the claims to this species depend from or otherwise include each of the limitations of an allowed generic claim.

In view of the above noted withdrawal of the restriction requirement as to the linked species, applicant(s) are advised that if any claim(s) depending from or including all the limitations of the allowable generic linking claim(s) be presented in a continuation or divisional application, such claims may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

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1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In claims **12 and 14**, lines 6-7, "the substrate" is changed to – a substrate--.

Allowable Subject Matter

Claims **1-3 and 5-16** are allowed.

The following is an examiner's statement of reason for allowance:

Claims **1-3, 5 and 6** are allowable over the prior art of record because the prior art of record does not teach or render obvious a multilevel wiring interconnect in an integrated circuit comprises, in combination with all other features, the low dielectric constant insulator includes a film in which of a set methyl groups and a fluorine group of atoms are as much as 43% and 9% respectively of that for a content of silicon atoms in the film as recited in independent claim **1**.

Claims **7-11** are allowable over the prior art of record because the prior art of record does not teach or render obvious a multilevel wiring interconnect system comprises, in combination with all other features, the low dielectric constant insulator includes a film in which of a set methyl groups and a fluorine group of atoms are as much as 43% and 9% respectively of that for a content of silicon atoms in the film as recited in independent claim **7**.

Claims **12 and 13** are allowable over the prior art of record because the prior art of record does not teach or render obvious a system having a multilevel wiring interconnect comprises, in combination with all other features, the low dielectric constant insulator includes a film in which

of a set methyl groups and a fluorine group of atoms are as much as 43% and 9% respectively of that for a content of silicon atoms in the film as recited in independent claim 12.

Claims 14-16 are allowable over the prior art of record because the prior art of record does not teach or render obvious a system comprising a processor, and an integrated memory circuit coupled to the processor, wherein the integrated memory circuit further includes a multilevel wiring interconnect, the multilevel wiring interconnect comprises, in combination with all other features, the low dielectric constant insulator includes a film in which of a set methyl groups and a fluorine group of atoms are as much as 43% and 9% respectively of that for a content of silicon atoms in the film as recited in independent claim 14.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy Huynh whose telephone number is (571) 272-1781. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Andy Huynh

02/11/05

Patent Examiner